Notice: The Intel® Embedded Media and Graphics Drivers may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.
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## Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2012</td>
<td>005</td>
<td>Errata updated for the Intel® Embedded Media and Graphics Driver, EFI Video Driver, and Video BIOS v1.16 for Windows® Embedded Compact 7.</td>
</tr>
</tbody>
</table>
Introduction

The Intel® Embedded Media and Graphics Driver, EFI Driver, and Video BIOS (Intel® EMGD) are designed to meet the requirements of embedded applications. Featuring Intel® Dynamic Display Configuration Technology (DDCT), the drivers run on the following Embedded Intel® Architecture (eIA) chipsets:

- Intel® Atom™ Processor E6xx

Intel® EMGD is designed to work with fixed-function systems, such as In-vehicle Infotainment (IVI) devices, Point-of-Sale (POS) devices, ATMs, gaming devices, etc. It can be configured to work with various hardware and software systems and supports Microsoft Windows* and Linux* operating systems, including embedded versions of these operating systems.

Please refer to the Intel® Embedded Media and Graphics Drive, EFI Video Driver, and Video BIOS User Guide and RELNOTES.txt in the software package for a detailed description of the supported features and display devices.

Purpose/Scope/Audience

This document is a compilation of Errata. It is intended for those who need to work with the graphics subsystem. This includes, but is not limited to: platform designers, system BIOS developers, system integrators, original equipment manufacturers (OEMs), system control application developers, as well as end users.

This document may also contain information that was not previously published.

This document provides information on open errata in all supported Intel® EMGD packages for version 1.16 of the Intel® EMGD product. It includes information on the following packages:

- Microsoft Windows Embedded Compact 7
Table 1. Affected Documents, Related Documents, and Reference Information

<table>
<thead>
<tr>
<th>Title</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Atom™ Processor E6xx Series Specification Update</td>
<td>457843</td>
</tr>
<tr>
<td>Intel® Atom™ Processor E6xx Series External Design Specification</td>
<td>433303</td>
</tr>
<tr>
<td>Intel® Embedded Media and Graphics Driver, EFI Video Driver, and Video BIOS User Guide</td>
<td>442076</td>
</tr>
<tr>
<td>Intel® Embedded Media and Graphics Driver, EFI Video Driver, and Video BIOS Technical Product Specification (TPS)</td>
<td>460826</td>
</tr>
<tr>
<td>VESA BIOS Extensions/Display Data Channel Standard, available at the following website: <a href="http://www.vesa.org/public/VBE/VBEDDC11.PDF">http://www.vesa.org/public/VBE/VBEDDC11.PDF</a></td>
<td>N/A</td>
</tr>
<tr>
<td>VESA BIOS Extension (VBE) Core Functions Standard Version 3.0, available at the following website: <a href="http://www.vesa.org/public/VBE/vbe3.pdf">http://www.vesa.org/public/VBE/vbe3.pdf</a></td>
<td>N/A</td>
</tr>
</tbody>
</table>

This document provides information on the 4F VBE functions, which are supported by the Intel embedded Video BIOS.

VESA BIOS Extensions/Display Data Channel Standard, available at the following website: http://www.vesa.org/public/VBE/VBEDDC11.PDF

This document provides information on the 4F VBE functions, which are supported by the Intel embedded Video BIOS.


Contains information on the VESA BIOS Extension (VBE) specification for standard software access to graphics display controllers that support resolutions, color depths, and frame buffer organizations beyond the VGA hardware standard.

Conventions and Terminology

Table 2. Conventions and Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Errata</td>
<td>Errata are design defects or errors. These may cause the Intel® Embedded Media and Graphics Driver, EFI Driver, and Video BIOS’ behavior to deviate from published specifications. Hardware and software designed to be used with any given release must assume that all errata documented for that release are present on all devices.</td>
</tr>
<tr>
<td>(plural)</td>
<td></td>
</tr>
<tr>
<td>Erratum</td>
<td></td>
</tr>
<tr>
<td>(singular)</td>
<td></td>
</tr>
</tbody>
</table>
## Summary Tables of Current Product Issue Activity

Table 4 shows the **Errata** that apply to the Intel® EMGD product. Intel may fix some of the **Errata** in a future release of the software as noted in Table 3. Table 4 uses the codes listed in Table 3.

### Table 3. Summary Tables Legend

<table>
<thead>
<tr>
<th>Status Indicator</th>
<th>Column</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Fix</td>
<td>Status</td>
<td>This erratum may be fixed in a future release.</td>
</tr>
<tr>
<td>Fixed</td>
<td>Status</td>
<td>This erratum has been previously fixed.</td>
</tr>
<tr>
<td>No Fix</td>
<td>Status</td>
<td>There are no plans to fix this erratum.</td>
</tr>
<tr>
<td>TBD</td>
<td>Status</td>
<td>This erratum still under investigation. Status to be determined.</td>
</tr>
</tbody>
</table>

A change bar to the left of a table row indicates an item that is either new or modified from the previous version of this Specification Update.

### Table 4. Errata

<table>
<thead>
<tr>
<th>ID</th>
<th>Impacted Platform</th>
<th>Package</th>
<th>Errata</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>203738</td>
<td>Atom E6xx</td>
<td>Windows Embedded Compact 7</td>
<td>Device performance is slow and the system intermittently hangs when rotation (90/270 degrees) and flip is enabled.</td>
<td>No Fix (Hardware limitation)</td>
</tr>
<tr>
<td>203917</td>
<td>Atom E6xx</td>
<td>Windows Embedded Compact 7</td>
<td>Microsoft CTK GDI &amp; DDRAW Test Suite Failures.</td>
<td>No Fix (Hardware limitation)</td>
</tr>
<tr>
<td>204558</td>
<td>Atom E6xx</td>
<td>Windows Embedded Compact 7</td>
<td>3D Mobile Mark 2.0 test causes corruption and hangs up.</td>
<td>TBD</td>
</tr>
<tr>
<td>204608</td>
<td>Atom E6xx</td>
<td>Windows Embedded Compact 7</td>
<td>QT application fails when using eglChooseConfig() to create OGL context.</td>
<td>No Fix</td>
</tr>
<tr>
<td>204974</td>
<td>Atom E6xx</td>
<td>Windows Embedded Compact 7</td>
<td>Display is corrupted when booting from EPOG to Windows* Embedded Compact 7 OS.</td>
<td>TBD</td>
</tr>
<tr>
<td>205235</td>
<td>Atom E6xx</td>
<td>CED</td>
<td>Feature options for non-supported Lapis Semiconductor* ML7213 appear on CED Port Configuration page.</td>
<td>TBD</td>
</tr>
<tr>
<td>205236</td>
<td>Atom E6xx</td>
<td>CED</td>
<td>Both Vertical Extended and DIH options shown in CED Display Configuration Mode</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Errata

1. **Device performance is slow and the system intermittently hangs when rotation (90/270 degrees) and flip is enabled.**

   Reference #: 203738  
   Driver: Graphics  
   Platform: Atom E6xx  
   Package: Windows Embedded Compact 7  
   Resolution: On a single display device with rotation (90/270 degrees) and flip enabled, the device performance is slow in accessing folders, etc. in the Windows Embedded Compact 7 image. When SDVO is the primary port of choice, due to low performance, playing video and dragging and dropping objects around the desktop, the system intermittently hangs. This is a hardware limitation and it will not be fixed.  
   Status: No Fix (Hardware limitation)

2. **Microsoft CTK GDI & DDRAW Test Suite Failures.**

   Reference #: 203917  
   Driver: Graphics  
   Platform: Atom E6xx  
   Package: Windows Embedded Compact 7  
   Resolution: Hardware has limitation that it does not support creation of YV12 and I420 type off-screen surfaces in video memory. YUV planar render surface allocation is not supported while YUV planar overlay surface allocation is supported.  
   Status: No Fix (Hardware limitation)

3. **3D Mobile Mark 2.0 test causes corruption and hangs up.**

   Reference #: 204558  
   Driver: Graphics  
   Platform: Atom E6xx  
   Package: Windows Embedded Compact 7  
   Resolution: Using 3dMark Mobile tests on Windows Embedded Compact 7 may result in driver crashes during testing at this time. For now, please do not use 3DMark Mobile on Windows Embedded Compact 7. OpenGL support is known to work when used from normal applications.  
   Status: TBD
4. **QT application fails when using `eglChooseConfig()` to create OGL context.**

   Reference #: 204608  
   Driver: Graphics  
   Platform: Atom E6xx  
   Package: Windows Embedded Compact 7  
   Resolution: Qt uses the `eglChooseConfig()` function to create the OpenGL context, but this failed when running under Windows Embedded Compact 7 for all OpenGL apps. This issue will not be fixed in the graphics driver.  
   Status: No Fix

5. **Display is corrupted when booting from EPOG to Windows* Embedded Compact 7 OS.**

   Reference #: 204974  
   Driver: Graphics  
   Platform: Atom E6xx  
   Package: Windows Embedded Compact 7  
   Resolution: This issue is under investigation and there is no planned workaround at this time.  
   Status: TBD

6. **Feature options for non-supported Lapis Semiconductor* ML7213 appear on CED Port Configuration page.**

   Reference #: 205235  
   Driver: CED  
   Platform: Atom E6xx  
   Package: CED  
   Resolution: The graphics driver does not support Lapis Semiconductor* ML7213 under WEC7 operating system. Please do not select this option.  
   Status: TBD

7. **Both Vertical Extended and DIH options shown in CED Display Configuration Mode**

   Reference #: 205236  
   Driver: CED  
   Platform: Atom E6xx  
   Package: CED  
   Resolution: If you set Vertical Extended Mode in CED Chipset Configuration page followed by configuring EMGD Package Page with WEC7 OS, you will notice an error message “Vertical Extended mode is supported only for Linux.” Please select DIH mode for your configuration for WEC7 OS.  
   Status: TBD
Issues Closed in Version 1.16

Issues that have been either resolved or for some other reason are no longer considered open in the current software version are included here.

Table 5. Resolved and Closed Issues

<table>
<thead>
<tr>
<th>ID</th>
<th>Impacted Platform</th>
<th>Package</th>
<th>Errata</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>205163</td>
<td>Atom E6xx</td>
<td>Windows Embedded Compact 7</td>
<td>Non-supported features such as STM* IOH ConneXt and Chrontel* CH7036 options exist in CED Port Configuration page.</td>
<td>Fixed</td>
</tr>
</tbody>
</table>

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